

Coral Reef Restoration and the Use of Corals of Opportunity and Coral Nurseries



Reef Damage - Restoration



Sources of Donor Corals



Corals of Opportunity



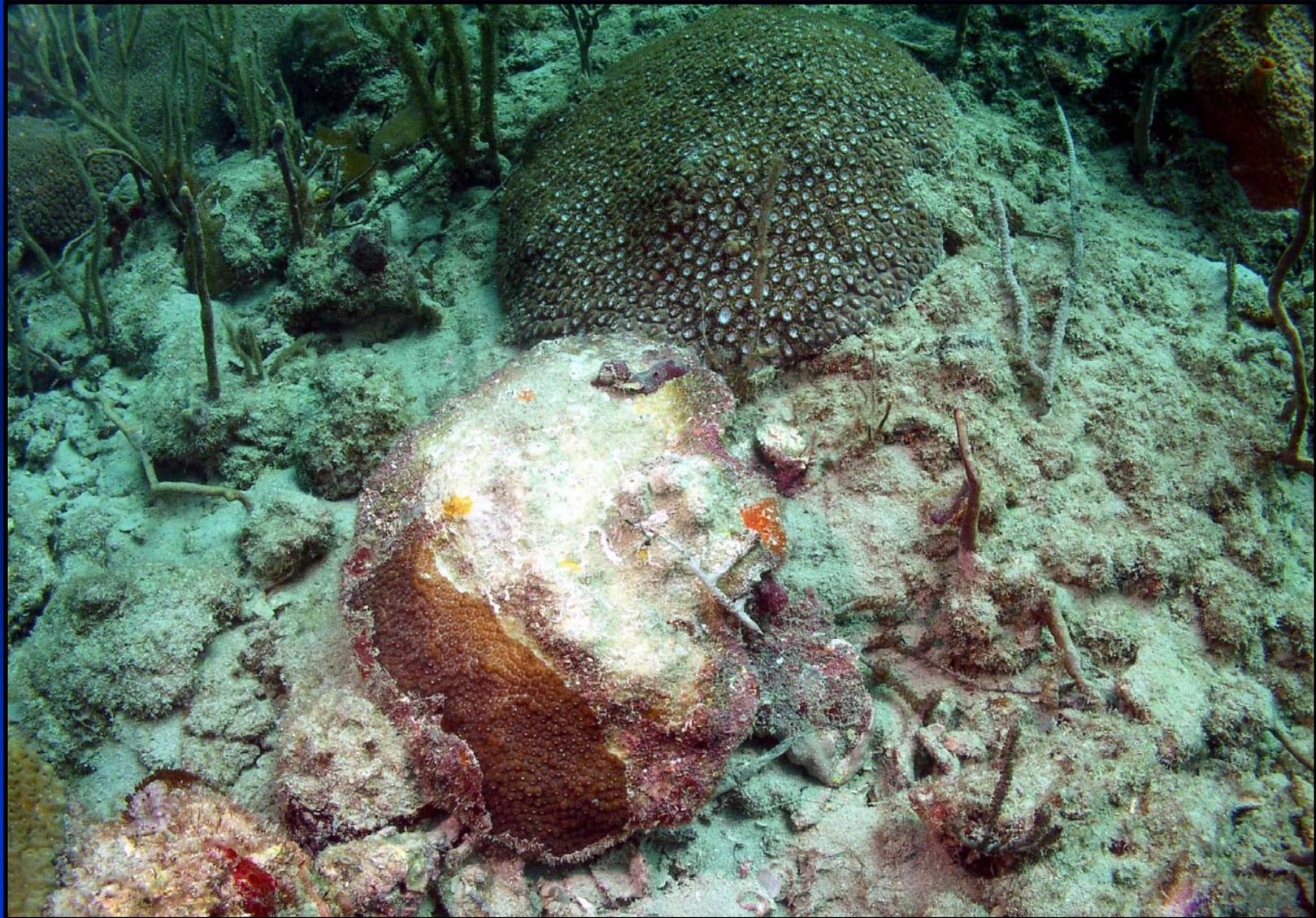
Formation of Corals of Opportunity



Bioerosion



Fate of Corals of Opportunity



Coral Nursery Project Team

- Local academia (National Coral Reef Institute of Nova Southeastern University Oceanographic Center [NSUOC/NCRI])
- Local government regulatory and management agency (Broward County Department of Planning and Environmental Protection [BC EPD])
- Local NGO (Ocean Watch Foundation [OWF])



Project Objectives

- 1. To establish a cooperative effort among scientists, resource managers, and community members, who will serve as the coral nursery team**
- 2. To create a coral nursery to rescue and cache corals of opportunity**
- 3. To collect data to be used by resource managers on species and size specific success and growth rates of transplanted corals of opportunity**
- 4. To use healthy and stabilized corals of opportunity as a source of transplant donors for future restoration of coral reef habitat**

Project Methods



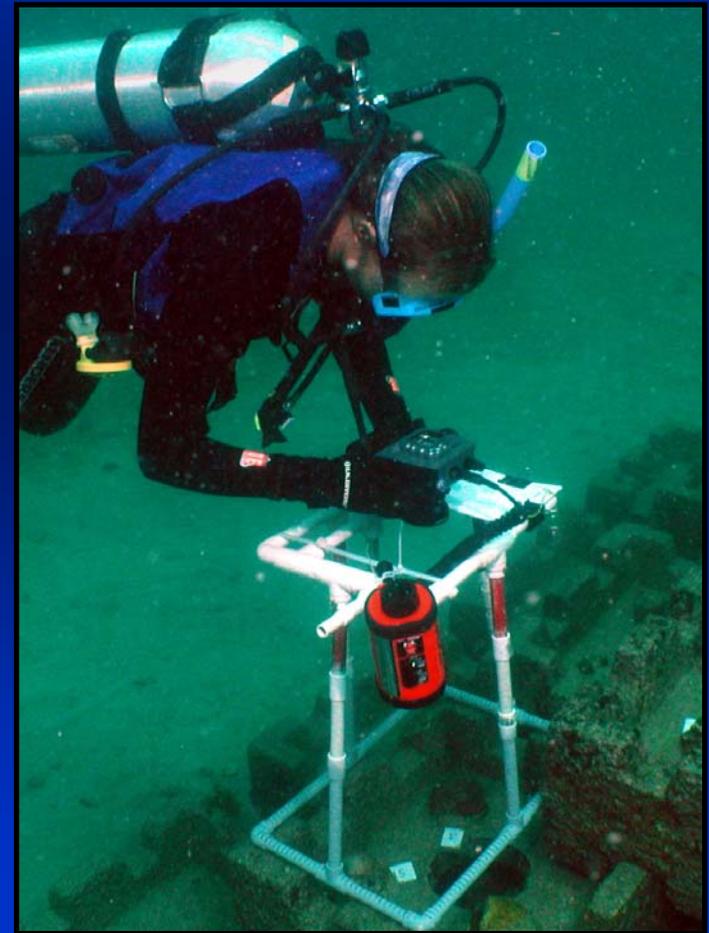
Dive 1 = Coral Collection



Project Methods Continued



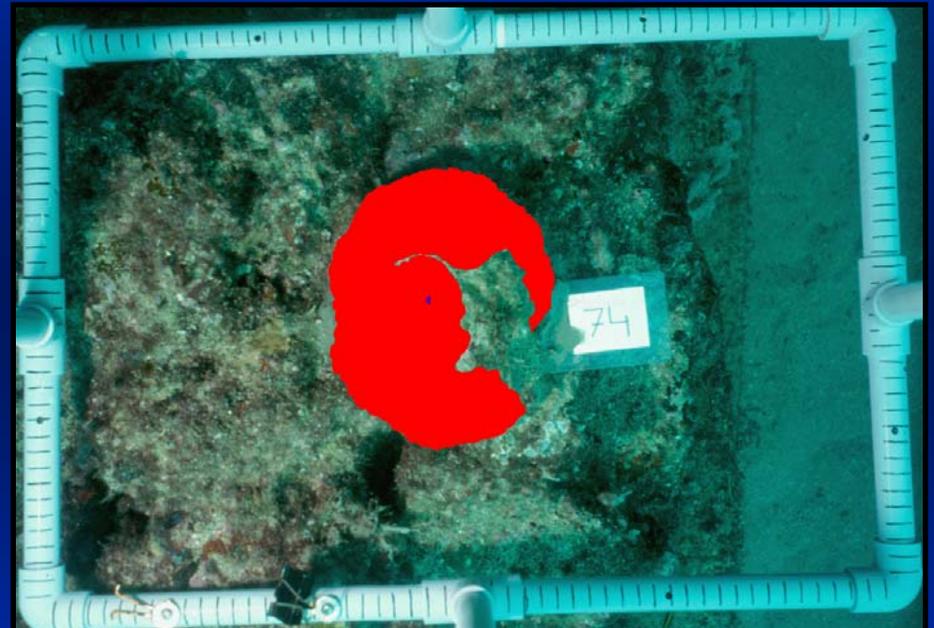
**Dive 2 = Transplantation &
Data Collection**



Transplanted Coral Monitoring



Transplanted Coral # 74



Transplanted Coral # 74

Control Coral Monitoring



Attached Control Coral # A 14



Loose Control Coral # I 16, both

As Found Initially (Top) and Upright (Bottom)



Project Results

Associated with Project Goals:

1. To establish a cooperative effort among scientists, resource managers, and community members, who will serve as the coral nursery team



- Members of NSUOC/NCRI, BC EPD, and OWF have participated in 20 transplantation field days, 24 monitoring field days, and 7 seminars

Project Results Continued

Associated with Project Goals:

2. To create a coral nursery to rescue and cache corals of opportunity



- 350 transplanted corals of opportunity have been collected representing 17 species, as well as 60 attached control and 28 loose control corals

Project Results Continued

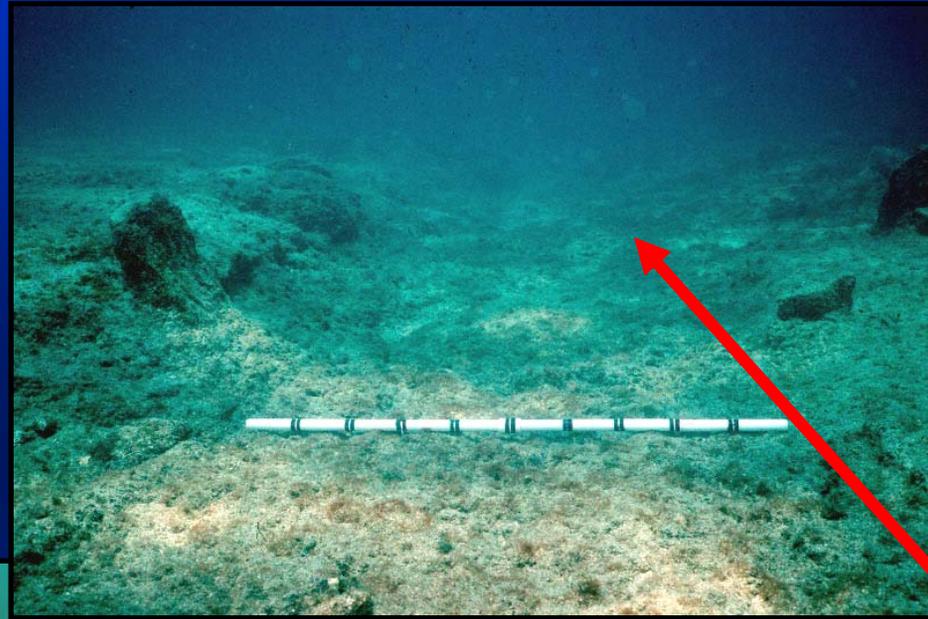
Associated with Project Goals:

3. To collect data to be used by resource managers on species and size specific success and growth rates of transplanted corals of opportunity
 - 95% survivorship of corals of opportunity
 - 96% survivorship of attached control corals
 - 67% survivorship of loose control corals

Conclusions

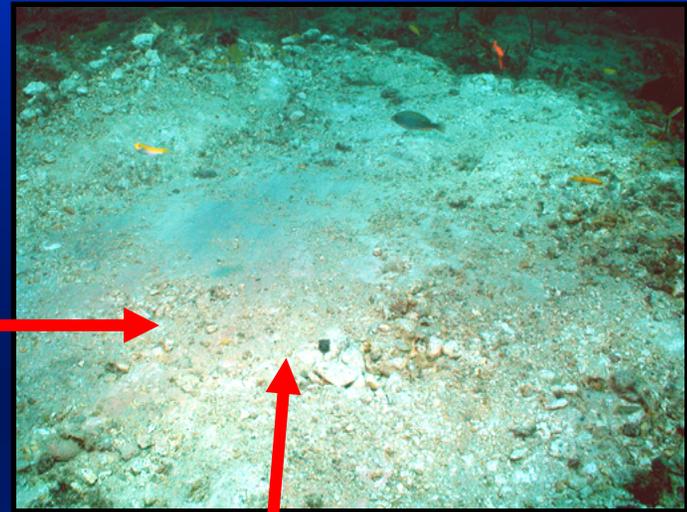
- The creation of an integrated project team is an effective way to both increase public awareness and accomplish the goals of the project
- The survivorship of transplanted corals of opportunity is nearly identical to that of naturally attached corals, and is higher than that of corals of opportunity left detached
- Corals of opportunity are readily available
- The species composition of corals of opportunity appears to reflect the species composition of natural corals

4. Ultimate Goal

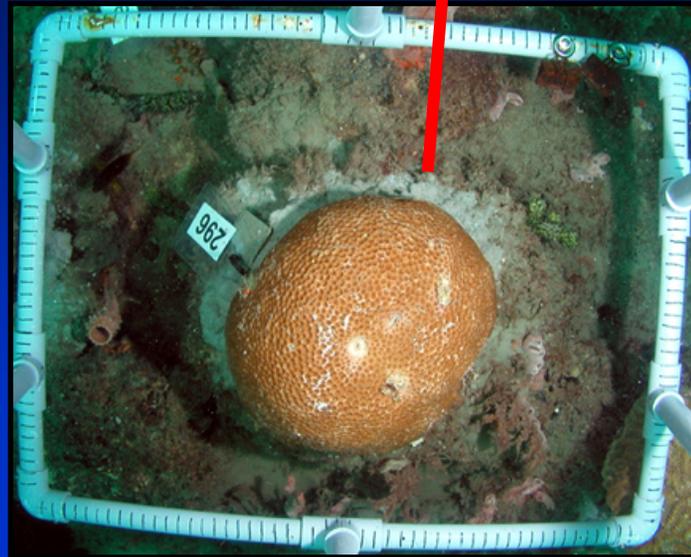




**June 2003
CV Alam Senang Grounding**



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